

some suffering from the stormy weather. Some lower range remained open in Wyoming, but the generally unfavorable weather caused shrinkage of livestock, especially during the first decade when crusted snow was reported. Low temperatures caused suffering in the central Rocky Mountain area, with some shrinkage noted, and additional snows necessitated more extensive feeding. Moisture was needed in New Mexico and western Texas, but rain or snow increased the water supply in Arizona, although causing some suffering to livestock. Deep snow was hard on livestock in Utah, especially during the last decade when it hindered feeding of isolated herds. Feeding was heavy during the month in Nevada and Idaho;

the cold weather was unfavorable for the growth of grass in Pacific coast sections, but livestock did well.

Conditions were favorable for winter truck most of the month in the South, although there was some retardation by cold; the reaction to lower temperatures at the close prevented premature development of vegetation. Much truck was planted in the Carolinas and conditions favored work in Florida most of the month. Much new growth of citrus was reported in Florida, with some bloom toward the close of the month; navel orange, grapefruit, and lemon picking advanced in California, although there was some frost injury in the Imperial Valley and considerable firing was necessary during the last decade.

551.506(261.1) WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

NORTH ATLANTIC OCEAN

By F. A. YOUNG

The weather over the North Atlantic during January was most unusual in many respects. The number of days with gales was equal to or above the normal over the greater part of the ocean, except for the region east of the twentieth meridian, where it was considerably below. Vessels in the trans-Atlantic route often encountered a series of heavy storms, lasting in some cases from six to eight days, while the storm area extended much farther south than usual, as in the region between the Azores and Bermudas gales were reported on from five to six days.

As shown in Table 1, the average pressure was much below the normal at Horta and above at land stations on the British Isles. An area of high pressure covered the coast of northern Europe for the first 14 days of the month. At Lerwick the average barometric reading for this period was 30.55 inches, with the lowest reading of 30.20 inches on the 1st. The average reading at this station for the last 17 days of the month was 29.99 inches or 0.29 inch above the monthly normal.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, 8 a. m. (seventy-fifth meridian). North Atlantic Ocean, January, 1929

Stations	Average pressure	Departure ¹	High-est	Date	Low-est	Date
	Inches	Inch	Inches		Inches	
Jullanehaab, Greenland.....	29.52	(²)	30.20	11th.....	28.55	21st.
Belle Isle, Newfoundland.....	29.48	-0.32	30.34	6th.....	28.34	21st.
Halifax, Nova Scotia.....	29.84	-0.16	30.78	5th.....	29.18	29th.
Nantucket.....	29.99	-0.10	30.70	5th.....	29.52	19th.
Hatteras.....	30.11	-0.02	30.52	3d.....	29.68	8th.
Key West.....	30.08	-0.01	30.22	14th.....	29.84	29th.
New Orleans.....	30.12	+0.01	30.48	2d.....	29.76	5th.
Cape Gracias, Nicaragua.....	29.91	-0.03	29.96	7th ⁴	29.88	5th. ⁴
Turks Island.....	30.13	+0.08	30.20	7th ⁴	29.92	30th.
Bermuda.....	30.21	+0.08	30.52	5th ⁴	29.66	29th.
Horta, Azores.....	29.80	-0.30	30.28	3d ⁴	29.20	29th.
Lerwick, Shetland Islands.....	30.24	+0.64	30.90	11th.....	29.69	19th.
Valencia, Ireland.....	30.20	+0.30	30.69	13th.....	29.57	31st.
London.....	30.28	+0.28	30.78	8th.....	29.90	15th.

¹ From normals shown on Hydrographic Office Pilot Chart, based on observations at Greenwich mean noon, or 7 a. m., seventy-fifth meridian time.

² Average of 27 observations.

³ No normal available.

⁴ And on other dates.

The number of days with fog was much below the normal over the Grand Banks and northern steamer lanes, where fog was not reported on more than four days in any 5-degree square. In the western section of the Gulf of Mexico it was unusually prevalent, occurring on eight days, and on three days off the coast of Portugal.

During the first seven days of the month the middle and eastern sections of the steamer lanes were swept by a series of severe gales; on the 6th and 7th the storm

area extended as far south as the Azores and to the eastward as far as the twentieth meridian. On the 8th moderate conditions prevailed generally, with the exception of the disturbance near the Azores, which by that time had moderated considerably.

On the 10th a severe disturbance of limited extent was central near 38° N., 37° W., while strong southerly gales also prevailed along the American coast between Hatteras and New York. By the 11th the southern Low had decreased in intensity although northwest gales were still encountered by vessels near 35° N., 40° W., and southwesterly winds of force 7 to 10 in the region between the Bermudas and Newfoundland.

The next storm occurred on the 14th and was central near Sydney, Nova Scotia; this was of limited extent, although whole gales prevailed between the fortieth parallel and Newfoundland, while moderate weather was the rule over the remainder of the ocean.

From the 16th to the 19th the middle section of the steamer lanes was swept by moderate to strong gales, and on the latter date southwesterly winds of force 7 to 8 occurred west of the sixty-fifth meridian, between the thirty-fifth parallel and Nova Scotia.

Charts VIII to XIII cover the period from the 20th to 25th inclusive, and give an idea of the exceptionally stormy conditions that prevailed over the western and middle sections of the steamer lanes. It was on the evening of the 23d that the crew of the Italian S. S. *Florida* was rescued by a boat crew from the American S. S. *America*, Capt. George Fried. The observer on board the *America*, Mr. John Hultman, rendered a most interesting special report of the weather conditions experienced by his ship from 8 a. m. on the 20th to midnight on the 24th. Observations were taken every two hours until noon of the 21st, and every four hours during the remainder of the period. The force of the wind varied from 7 to 11 with the exception of a lull to force 3 in the early morning of the 21st, and again to force 4 at 4 p. m. on the 23d. The lowest barometer was 28.58 inches at 6 a. m. on the 21st, in 44° 22' N., 51° 12' W., and the highest force of wind, west 11, from 10 a. m. to 2 p. m. on the 20th, and again from 4 p. m. on the 21st to 8 a. m. on the 22d. At 8 p. m. on the 23d, near the time of rescue, the ship was in 40° 30' N., 57° 30' W., wind NW. 9, barometer 28.99; raining.

From the 26th until the end of the month, heavy weather continued in southern waters, the storm area on several days extending as far south as the thirtieth parallel, while during part of this period moderate to strong gales also prevailed along the American coast.

On the 30th and 31st southerly and westerly winds of force 7 and 8 were reported by vessels between the twentieth meridian and French coast.